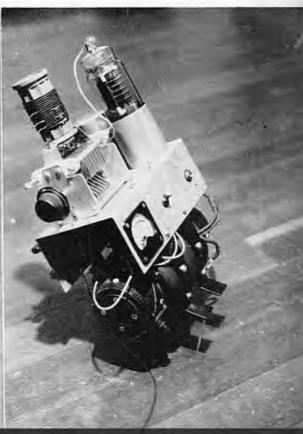
XTAL

JULY 1948 Vol. 10 No. 7

for the POID J. H. Doble, VE3ACC, Ashburn, Ont.







Universal Driver Transformers

Type	Watts	D.C. Per Wndg.	Weight
1703 1705	15 30	70 MA. 100 MA.	6 lhs. 10 lbs.
1707	60	140 MA.	16 lbs.

Ten ratios from 1,25:1 to 6.3:1. Total Pri, to half sec.

PRACTICAL APPLICATION

Driver	Mod.	Ratio Pri. To Half Sec.
PP2A3	PP869	2.1:1 for 100W - 1.97:1 for 145W
PP2A3	PP811	3.2:1 for 175W - 2.66:1 for 220W
PP2A3	PPTZ40	1.57:1 for 225W - 1.57:1 for 250W
PP2A3	PP805	1.57:1 for 300W - 1.25:1 for 370W
PPP2A3	PP810	4.57:1 for 590W - 1.25:1 for 725W
PP6L6	PP809	4.1:1 for 100W - 3.2:1 for 145W
PP6L6	PP811	4.1:1 for 175W - 3.2:1 for 220W
PP6L6	PPTZ40	2.04:1 for 225W - 2.04:1 for 250W
PP6L6	PP805	2.55:1 for 300W - 2.04:1 for 370W
PP6L6	PP810	1.57:1 for 590W - 1.25:1 for 725W

500 OHM line to mod. grids—connect line to 7 and 8—join 7 and 11, 8 and 12—connect grids to 2 and 5, join 3 and 4 for "C" bias.

PP2A3 driver closs AB1 + 300 V-62 V fixed bias 15 watts output. PP6L6 driver class AB1 with 20% feedback + 360 V, 250 OHM cath, res. output 20 watts. The above ratios are correct only when the driver is operated at the specified voltages.

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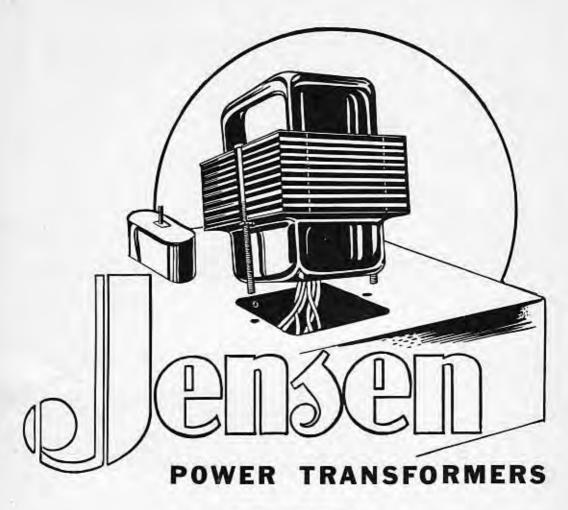


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CANADIAN GENERAL ELECTRIC SA

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VOL. X



JULY 1948

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CAROA

... CAROA Elections ...

ELSEWHERE in this issue will be found a motion on the subject of association elections. It is a motion of much importance which is worthy of the careful attention and consideration of every member.

Simple though the question appears to be on the surface, its real answer may not be readily apparent, for more is involved than a yes or no reply to an academic query, or the democratic right of members to determine association leadership through the medium of the ballot. Possibly the future of CAROA is involved, therefore practicalities must not be overlooked. The ultimate good of the association must be the motivating factor behind every decision. This demands thought.

It is not the purpose of this editorial to influence the thinking of members, but rather to submit some pertinent facts in such manner as to make of them an aid in the formulation of a decision. A decision, if it is to be objective and constructive, and to be more scientific than a mere guess, must be predicated on a knowledge of the facts. It is the mission of these paragraphs to present those facts for your information, guidance and assistance.

It is axiomatic that the solving of a problem first calls for an understanding of the problem. To paraphrase, it might be said that to decide for or against an immediate election first calls for an understanding of the possible effects of such an election. So, let us review the present position of the association in order that you may judge the possible effects.

The basic organization of CAROA is still in a state of flux. Our fundamentals will be part of the new constitution content, and will be officially determined by the members when they adopt the constitution.

The draft constitution is partially completed, but further time and study will be required before it is ready for submission to the membership for amendment and, finally adoption. Many items to be included in the constitution are of a routine nature and have caused us no trouble. However, the matter of representation on the Executive Committee from each call area, at the same time making it possible to hold frequent meetings of the committee, is a matter that has caused us much concern-It is one of the problems holding up the new constitution. We have asked the members for suggestions, but none have been forthcoming. The constitution committee has submitted a thought on the matter but it has not met with unanimity in the Executive Committee. Upon

further analysis by the Executive, the proposal may be accorded unanimous support or, on the contrary, sufficient inherent weakness may be revealed to justify its elimination from further consideration.

The financial position is not all we would like it to be. We might as well be frank about that. The Executive Committee has been struggling with this major problem at regular and special meetings. The situation is simply that the high cost of living reflects itself in the cost of operating the association and of producing XTAL. Our expenditures have been restricted to operating essentials but we still have our acute financial worries. Some conception of the nature of this problem may be had from an understanding of the fact that after taking in advertising agencies' commission, the commission of our advertising solicitor - which is his sole basis of remuneration - and XTAL printing costs, there is available to the association approximately forty cents of every dollar of advertising space sold. Some may be of the belief that this position can be currently improved, but our efforts and experience tell us this is not so.

Next, it is obvious than an immediate election must be held under the provisions of the existing constitution. Let us briefly scrutinize some of those provisions.

First, we shall quote section 11:

"There shall be an Executive Committee composed of the members elected from each Call District, the Chairman of each Chapter, and the Immediate Past President."

Now, a portion of section 16:

- Each Call District shall be entitled to elect one of its members to the Executive Committee.
- (2) Whenever a Call District includes within its area an association membership of fifty, it shall be entitled to elect a second member to the Executive Committee, and an additional member for each twenty-five members or fraction of twenty-five in excess of fifteen over the first fifty members.

Our Cover Picture . . . =

shows two views of the portable transmitter described in the technical article this month. See page 9. After the foregoing, section 12 comes into play, which says:

"The Executive Committee shall, from its own numbers, elect the officers and a Publications Manager,"

The officers of the association are enumerated by section 10, which is as follows:

"The officers of the association shall be a President, a Vice-President, a Secretary and a Treasurer.

Section 5 is one of importance, and is worthy of note. It says:

"The office of the Secretary, the Treasurer and of the Publications Manager shall be at headquarters."

Then, section 4:

"The headquarters of the association shall be in the City of Toronto."

If we analyze these excerpts from the constitution, we will find that it is quite possible to immediately hold an election under the existing constitution which will provide for representation on the Executive Committee from every call district. The extent of such representation will be directly related to association membership in the district. But, with the exceptions noted, it is possible for the committee to be composed of people who, subject to call district distribution, live anywhere within the four corners of the country and none residing with commuting distance of headquarters. That fact is of importance only in so far as it proves a detriment to the holding of frequent meetings of the Executive Committee which are strictly necessary in our present circumstances.

For some time past, the committee has found it necessary to meet every week. Some of our Executive members are serving on sub-committees which meet between meetings of the main committee. There also is work to do between meetings. All this has imposed somewhat of a burden on the members of the Executive, particularly on the officers, and especially on the President, who has proved to be a very capable and willing jack-of-all-trades.

One might reasonably ask the need for so many meetings. The fact is, the Executive Committee has a dual capacity. It is directing the affairs and destiny of CAROA, and those who have had experience in developing a comparatively young association will be quick to realize the work and responsibilities involved. But the Executive has another job of no small magnitude, and that is the publication of a monthly magazine. That in itself, under prevailing conditions, is a mighty big job for volunteer workers,

Many are the factors that demand frequent meetings of your Executive Committee. We hope it will not always be so, but, until we are more firmly established than we are at present, there seems to be no alternative.

The immediate question is simply one of deciding whether or not it is possible to give direction to the affairs of CAROA and XTAL by a decentralized form of Executive Committee such as might result from an election held under the existing constitution.

We must not lose sight of the fact that under our present set-up, we have District Representatives who are doing a really swell job and who, pending the new constitution, are a very effective liaison between members and the Executive Committee. Your DR will be glad to get your ideas, suggestions or reactions for transmission to headquarters. He is part of our administrative machine and he lives right in your own call district. It is true that he does not attend meetings of the Executive Committee unless he happens to be visiting Toronto when a meeting is held, nevertheless, District Representatives do bring many things to the attention of the Executive Committee. This means that each call district has a direct channel into the Executive Committee.

Now, a word about the present Executive Committee. There are four still serving who were part of the group which founded the association and who were subsequently elected to office by the association membership about a decade ago. They are: President T. G. E. Powell, Ve3ZE; Vice-President R. A. R. Macdonald, Ve3APS; A. G. Palmer, Ve3WK, and J. Staley, Ve3GR. These men have been flanked by others who have been appointed to complete the unexpired term of the members causing the vacancies. The names of these appointees appear in every issue of XTAL.

Vacancies on the committee have been filled by appointing members, who, for one reason or another, were deemed able to make a substantial contribution to CAROA development, and who could regularly attend frenquent meetings of the Executive Committee. In making such appointments, we drew on precedent as found to exist in similar organizations, and as provided in the Companies Act. There seemed little point to holding elections to fill vacancies rather than a general election, and we felt that the fortunes of the association were not such as to withstand a decentralized committee. Appointments were made in the belief that such was the only practical course available in the circumstances.

The members of the committee, however, feel that the membership should now decide to hold a general election, or, in the alternative, give the present Executive Committee a mandate to carry on for such further period as the association members may decide,

We all subscribe to the belief that the Executive Committee of a national association should be representative of the territory served by the association. However, in a territory so expansive as Canada, is there a level of development, and a degree of financial security to be achieved before launching into decentralized executive direction? If so, are we on that level? Have we attained that security? The present members of the Executive Committee do not think so.

This question is submitted to you, however, because this is a democratic association. You have a right to an election if you wish one. It is your association to fashion as you think best. It is your right and privilege to choose the leaders of your association. It is also your right to be placed in possession of sufficient information to enable you to make the wisest possible decision, and that is the objective of these paragraphs. In that respect it may be pertinent to point out that this editorial has been written by the same member of the Executive who introduced the election motion. That, we mention in order that there may not be any misunderstanding.

So, CAROA members, the decision is yours to make. Here is your opportunity to say what you like and think with the knowledge that if enough people think as you think, you will have your own way.

Democracy wheels into action—its vitality will be reflected by the extent of your response. In the words of the bill-board; "Vote as you like, but yote."

EXCERPTS FROM EXECUTIVE COMMITTEE MINUTES

At the executive meeting of June 3 the following resolution was moved and seconded and tabled for further discussion:

WHEREAS demands, requests or expressions variously made by many members indicate an extensive conviction that association elections should be held at the earliest possible moment, and

WHEREAS the last election was held in the year 1938 or 1939, which fact gives strength and merit to current election demands, and

WHEREAS elections have been withheld pending the adoption of a new constitution, and

WHEREAS the Constitution Committee has submitted the nucleus of a draft constitution toto the Executive Committee which is now receiving the consideration of that body, and

WHEREAS it is apparent from such consideration that a further period of approximately one year will be required to:

(a) give adequate consideration to the many

factors i,ncluding membership representation on the governing body, which must be included in the proposed constitution;

- (b) submit the draft constitution to the membership with an invitation to suggest changes;
- (c) permit Executive Committee study of all suggested changes;
- (d) submit suggested changes, with Executive Committee comment, to the membership for further expression on the suggested changes;
- (e) obtain constitution adoption vote, and

WHEREAS following the adoption of the new constitution, a further period of approximately three months will be required for the purpose of receiving nominations, holding an election and installing officers, and

WHEREAS the principles of democratic control entitle the members to the right and privilege of an election, and

WHEREAS further deforment of elections, notwithstanding any validity of reasons therefor, will be a potentiality for the destruction of confidence in the association, therefore,

BE IT RESOLVED that the Executive Committee continue its deliberations on the content of the new constitution and, in order that such deliberations may progress without detriment from a time factor, that association elecions be held in 1948 pursuant to the provisions of the existing constitution, and that all things necessary as preliminaries to the holding of an election be done forthwith and, further, that information in the form of advance notice he set forth in the next ensuing issue of XTAL following the adoption of thsi resolution, and that such information include a copy of this resolution.

After discussion following lifting the above from the table of the meeting of June 10, it was moved and carried that the question be referred to the membership, and Mr. R. Macdonald prepare an article on same for publication in XTAL. The editorial in this issue outlines the discussion by the executive committee, and all members are urged to express themselves on this question.

WAVE AWARDS

The following WAVE certificates have been issued in accordance with rules and regulations already published in the October, 1947, issue of XTAL, and repeated in April 1948.

- 17. A. F. Ferguson, Ve3HP, Toronto, Ont.
- 18. D. Edwards, GSDO, Birmingham Eng.
- Jerome F. Lowenstein, W8RDZ, Cleveland Heights, Ohio.

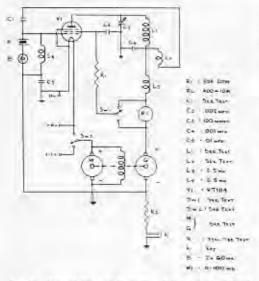
35 watts from a Battery-Powered Portable

By C. Littlewood, Ve7ABQ

Here's a portable CW rig that really puts out power despite its simplicity and small size. It's built around a type VT104 pentode and a 12 volt to 1200 volt 75 ma. dynamotor, Both items are war surplus and once you've got them you practically have the transmitter.

To get the greatest overall efficiency no exciter stages are used and the VT104 operates as a crystal oscillator. The only unconventional feature of the circuit is the feedback arrangement. It is a variable version of the method deevloped by C. H. Brereton, Jan. XTAL. Advantages noticed over conventional grid-plate capacity feedback are:

- Rapid keying is possible (no crystal is lazy in this circuit).
- 2. Crystal current is less,
- With weak crystals the output is greater,



L1 is the plate tank coil. L2, the feedback coil, is 14 turns of No. 22 enamelled close wound on a %" form and is located inside the coil form. It is not critical, but must be wound in the same direction as the tank coil. L1. Feedback is controlled by C, a homemade condenser consisting of a piece of well-insulated stranded No. 16 wire sliding inside a 2%" length of 4" copper tubing which is bolted to an insulated part of the tank condenser. Increasing this capacity increases the feedback; only about 42" of the No. 16 need be inside the tube. The meter reads plate current

with Sw. 1 in one position and plate and screen current in the other position. The difference of the two readings is the screen current. Both the meter and Sw. 1 should be insulated for 1500 volts. For preliminary tuning, the knife switch, Sw 2 may be set for 6 volts.

The chassis is bolted to a 1" by %" strap iron frame which is screwed on to the dynamotor. Rubber grommets separate the chassis from this frame to reduce chassis vibration. A 2 volt 60 ma. bulb which serves as a current indicator and fuse for the crystal is mounted behind the jewel in photo 1. The crystal is housed in a shield can which may be seen beside the tube in photo 2.

The output is sufficient to light a 40-watt bulb to nearly full brilliancy. If the builder doesn't mind overloading his dynamotor he can leave out the bias resistor and get a full 40 watts out (nothing gets red hot). A sixvolt supply may be used; the output, of course, is much less then. On the air the keying is clean and there is no chirp or ripple, even though no power supply filter is used. Despite the high plate voltage there is less than 200 volts across the key. Operation has been attempted only on 40 meters, but it should work as well or better on 80 meters.

The Ottawa Amateur Radio Transmitting Association will operate a station at the Central Canada Ehibition this year under the call Ve3CCE. The station will be operated for six days, August 23 to 28 inclusive. A souvenir QSL will be mailed on request.

LAPEL BUTTONS

For CAROA Members

Do you know that any member can obtain one of these handsome buttons by merely writing to HQ CAROA, 46 St. George Street, Toronto and enclosing postal note for 75c. We will send immediately your own CAROA lapel button.

NOW IN STOCK-NO WAITING

Identify yourself at Hamfests, outings, etc., in the coming season.

SEND FOR ONE NOW

CLUB ACTIVITIES

Several clubs have written in lately to say that they have written letters to CAROA in the past, but that no mention has been made of their activities in this column. Since this column started, shortly after the reorgani-zation of the CAROA executive, every club that has written in (and some from whom we have not heard directly) has been faithfully entered in the news. We must admit the news has had to be condensed due to limitations of space in XTAL. Several clubs have already applied for affiliation in CAROA, but as yet they have not received their certificates. If your club is one of those who have sent letters to CAROA in the past and have not had your letters answered, we urge you to write us once more and give us a chance to make amends. We are continually digging out "skeletons from the closet." Let us hope that you are not keeping that skeleton buried and have drawn hasty conclusions from what has gone before. Write us-ugain and again, if necessary until you receive an answer. Those clubs who have liked what they have read in this column can do us a favour by urging other clubs to ge behind CAROA and help give us the boost that we need to give us and the amateurs of Canada full and complete representation. The coming election, if the membership votes for it, will no doubt be the topic of many discussions at club meetings. We urge those clubs who will be discussing this important matter to give it full consideration. The years ahead for amateur radio are going to be no easy ones. The next international conference may well ring the death knell for more of our frequencies. Remember we once possessed the frequencies from 1750 to 2050 Kc. Your hope of retaining what we now possess lies in a strong national association. We need your help to make CAROA really strong. Clubs can help greatly by getting behind us and informing us of their activities. Let's fill in the empty spots in the Club Directory for a start!

The Winnipeg Amateur Radio Club held their regular monthly meeting in the clubrooms in the Free Press Building May 8. Visitors to the meeting were Ve3AZA, Toronto, Ont., and Ve4AB. A letter was read from the Acting O.C., R.C.M.P., J. E. Bird, in which he expressed the force's appreciation for the work done by Winnipeg amateurs during the Emerson floods, and especially to Alex Parmley, 4AD, and Don Taylor, 4QV. Guest speaker was Harold Rasmussen of the Research Department, Dominion Government, who gave an illustrated talk on mechanical measurements by electrical means, 4AD and 4QV described flood relief and showed pictures taken during the crisis.

The 1948 executive of the Truro Amateur Radio Club is: President, T. W. Mills, 1NZ, and secretary-treasurer, G. R. Rector, 1KN. The club has nine members, seven of whom are members of CAROA. The T.A.R.C. was organized in March, 1947, and their address is 222 Robie St., Truro, N.S.

We have heard of another club, the Stratford Amateur Radio Club. Their address is Box 219, St. Marys, Ontario. No further details are available, but we will try to have some news by next issue.

An excellent example of international cooperation is the local club for the twin cities of Sault Ste. Marie, Mich., and Sault Ste. Marie, Ont. The amateurs of both cities, under the direction of WSMEV, instructor at the Michigan Mining and Technology School, got together and formed a club last fall called the Twin Saults Radio Club. Membership consists of 8 Vc3's, 10 W8's and several SWL associate members. Meetings are held at the various members' homes. Secretary is Max Fisher, Vc3AFR, and the president is Herb Sandstrom, W8MEV. This is a unique club and the gang are to be complimented on a fine job of international good-will. What say, Niagara Falls, Fort Francis, Prescott, etc.?

The West Side Radio Club is moving their field-day site from Thistletown to King, Ont. Let us hope that this change does not bring them bad luck, so that they lose the cup this year.

The Nanaimo Amateur Radio Association has recently been formed in Nanaimo, B.C. Present membership is 21 and the meetings usually have 35 in attendance. The club is open to both sexes and several yl's and xyl's are among the members. The secretary-treasurer is H. Prescott, P.O. Box 187, Nanaimo, B.C.

The London Amateur Radio Club held their regular monthly meeting May 13. The picnic, which this club is organizing in conjunction with the Ontario Phone Club, was slated for sometime in July. Speakers of the evening were Dwight Fields and Gordon Godwin of Forest, who discussed and demonstrated high frequency equipment, especially for two meters. Final plans were laid for field day.

The Scarboro Amateur Radio Club is ready for field-day and are raring to go. Code classes under the direction of J. W. Harvey still continue, and two more students are ready for graduation. A separate class is held for the beginners in the club rooms on Tuesday evenings, so that the senior class can progress faster. The club has received some very heartwarming letters from Britain, thanking them for parcels which they have sent recently. Keep up the good work, boys!

While not exactly Canadian club news, mention must be made of a recent letter received

Concluded on next page

DX NEWS OF THE MONTH

R. D. Carter Ve300

Well, here we are at the beginning of vacation time and the bands every day seem to get just a little bit worse. It seems strange that last year conditions were so stable and while it did not roll in 24 hours a day nevertheless there was plenty to hear and work. Right now it is spotty, and though there is dx to be heard it is mighty hard to keep at it to dig them out as the noise level remains high and the short skip also makes it difficult to hear and work those signals that are getting through. This past week has shown some improvement and if any of you need any European or Asian stations it will pay you to put up with conditions and dig, as they are coming through and can be worked with nice reports. I had the opportunity to use one of the new Hammond 20-meter beams with the H.A.R.C. on field day and with only 25 watts we got some very pleasant surprises. You don't need much power when it's fed to a decent beam and we got several \$8 reports from Europe in the Sunday QRM. We also worked several VK's and ZL's with it, so don't give up those low-power rigs until you give a good antenna a chance. Also it's lots cheaper to put up a good antenna than to triple your power. We also hear that the West Side Radio Club had the same good luck with low power.

Many thanks for the fine replies to the countries lists we sent out, and though a number are at hand there aren't enough so far to start our new listing. We promise that next month we will have the listings in the form suggested and it will be of much interest to watch you all go for the balance of the year. It puts new zip in the operating and makes it worth while working some of the ones we have been passing up. More on this next month and don't forget any of you who haven't re-

by your conductor from Hilversum, Holland. Many of the Signal Corps men who were overseas during the past war will remember Hilversum as a friendly town which became a Mecca for the signals "Joes." The Hilversum gang send greetings to all Canadian hams, 'and offered to take any QSP to Holland. PAØFE, HS, EH and JM are on 10-meter fone and PA's PT, IDW, RU are on 10 and 20 fone, Most of the group are interested in VHF but are handicapped by lack of equipment and tubes. If anyone has any spare VHF tubes and would like to repay in part for the kindness accorded our boys overseas, kindly contact Rene Veltman, 31 Kapelstreet, Hilversum, Holland. The above address will also do to arrange skeds for QSP.

ceived these lists and want them can get these by dropping me a line.

Now we will dig into the mail bag and give you the dope on what the gang has been doing. VelNE sends in his list and from it we note that he has worked some real choice dx such as ZA2F, Albania, CR6AI, MD5KW and ZD1LQ. Ve3BHX worked OK1RW with his antenna only 10' off the ground also a three way with G2HFO and HH2JD. VelAQ is no longer, as Don has now moved to Montreal and will start all over again at Nitro, Que., and will have lots of competition from the Ve2's living near. The Yukon is again heard from, and VeSAS has been busy. The best is RV2/FO8 in Tahiti and Jack says he has been pounding in there every night. Wish I could get up enough ambition to get up early enough to hear him. This was done with a single 6L6 and 35 watts. Keep it up, OM. Ve3BWY is heard on regularly and in between G's continues to add a few countries. New ones were ZD2RGY, HA4EA and M1A for a choice one. Ve7CE with 40 watts to an 807 worked KH6NE and ZKIAM on 80 meters and ZLILQ and ZL4FT on 40. Ve5JV has added some nice ones with VK6, PK6, ZS, SM, HL, C1 and J3. Ve4RO has been busy with the garden but still found time to add ZD1, UF and CT3 to his total. VelPQ says the Halifax club are running a dx contest among themselves which lasts a month. That HF man VelQZ is doing ok in it, we bear. We would like more on this if someone will do the honours. The question has been asked re MM operation. It doesn't count.

Ve3AGC also worked RV2/FO8 and is planning on a rotary. A nice letter in from Ve7AFI, who works his dx with a 6V6 and 15 watts. Worked were C7AT, ZS2F, OA4AP, as well as VK, ZL, KH6, KL7, and needs only Europe for WAC. FB, Harry. Ve3QB is all set to go to town now that he has a VFO and promises to show us all up. Ve2WW added FK1AJ, FT4AN and KM6AH to his totals. He had a visit with W1FH in Boston and says that he's worked 206 countries and has confirmations from 189 of them. 2WW has been going around in circles ever since. Ve3BNL put up a 2-element shortened beam for 20 and has had good luck with it and has worked 41 countries since getting it tuned up. Ve3TB still needs Asia but otherwise gets out ok. Ve7HC worked OY31GO to up his total to 151. Ve3EK has put up a Smith bi-square antenna with the centre pole 60' high and in the short

QSY to page 21

VHF IN CANADA

Conducted by GORDON COLEMAN, VERANY

With the reporting in of several more stations competing in the CAROA VHF Marathon, we can resume this contest. The contest can stand many more entries, so check the rules in XTAL for February and enter your score now.

Mother Sol was kind enough to ionize the E layer several times during May and E's provided good 6-meter dx for those fortunate enough to be listening. Reports received about these openings make it possible to resume the CAROA 6-meter dx Derby. This yearly feature was won last year by Ve7AEZ with 159 QSO's and 25 states. The leading score this month is 25. That 1948 has not as yet been as good as 1947 is evident from a look at this column for July, 1947. The leader then had 70 QSO's by the E's route. However, there is some real god dx in store for the station who consistently operates on 6 meters and we can count on the band remaining open until well on in November. Please report the dx you have heard and worked on 6 and be assured of entry in the dx Derby.

Starting where we left off last month on, May 9, the 6-meter band has been open as follows:

- May 13—Good opening to Belleville, Oshawa and Toronto, Ontario stations at 2215-2330 hrs. EDST from W4's.
 - 16—Fair opening to Oshawa at 1700-1730 hrs. through heavy thunderstorms, and to Toronto at 2100-2200 hrs. from W4. During this opening Ve1QZ was heard on CW.
 - 20—Brief but strong opening to Toronto at 1230 hrs. from W4.
 - 23—A few W4 heard in Toronto at 1830 hrs, Band open to Vancouver at 1530-1630 from W6 and at 2045-2230 hrs. PDST from W6 and W7.

- 24—An excellent opening to Toronto, Belleville, Trenton, Oshawa and Hamilton at 1030-1300 hrs. from W9 and Wø's.
- 26—Vancouver working W6's at 1730-1830 hrs. PDST.
- 31—The best opening yet! 6 meters was open all day to Toronto, Belleville and Vancouver stations. Toronto—1030-1100 hrs. W4 and W5, 1200-1300 hrs. W4 and W5's came thru strong, 1430-1500 W9 and Wø. The band was open to Vancouver at 1900-1915 hrs. PDST from W6.
- June 4—Extremely good opening with little
 QSB and consistent S9 signals to Toronto, Hamilton, Oshawa and Belleville all evening from W4 and W5.
 Twenty-one Ontario stations were in
 on this opening and the W's numbered in the thirties.

No reports have been received from VelQZ and Ve2KH. However, these districts were in on the recent openings, as several Toronto stations heard both VelQZ and Ve2LP in St. Lambert, Que., being called by the W's.

There is little news this month about 144 Mc. From the silence presented by the active stations on this band, it would seem that nothing important happened down there, but it has been heard that some good dx has been recently worked on 2. Wish someone would drop us a line about 2 once in a while. Ve7AEZ says there are a few 2-meter stations active in Vancouver, with Ve7BQ xtal-controlled. Ve3RM promises some news of 420 Mc. activity in Ottawa, but as yet we have not heard from him.

Earl Fowler, Ve3AZT, carried out some very fine mobile work on 6 meters recently when he was en route from Oshawa to Bowmanville,

		CAROA 6 METE	ER DX DERBY		
Call	DX	States	Call	DX	States
Ve3RM	25	-	Ve3AOP	7	6
Ve7AEZ	21	5	Ve7NM	7	2
Ve3AJS	15	7	Ve7DU	4	2
Ve3AZV	12	10	Vc3APV	3	22332223
Ve3AGB	12	7	Ve3RW	3	3
Ve3APF	8	8	Ve3AET	2	2
Ve3AXT	8	6	VeSAAJ	2	2
Ve3ADJ	7	4	Ve3ARG	2	3
Ve7BQ	7	4	Ve3ARV	1	1
2.11			Ve3AVF	1	1

Ont, Starting with 3AZV in Oshawa, Earl then worked 3APV in Toronto. As he approached Bowmanville 3APV's sigs were QRMed by a Peterboro station, Earl then worked the Peterboro station until he was at his destination in Bowmanville. This is the first we have heard of 6 meter stations being active in Peterboro. How about some information on your activities, boys!

CAROA VHF Marathon

Call	Score
Ve3RM	270
Ve3AID	210
Ve3AJS	208
Ve7AEZ	144
Ve3BBW	130
VeADJ	78
Ve3RW	76
Ve3AOP	66
Ve3AAJ	61
Ve3OJ	38
Ve3ABG	26
Ve3BFP	18
Ve3ARJ	16

The computation of some of the scores are as follows:

Ve3RM- 50 Mc.-34 local qso's-34 x 1= 34 25 dx qso's-25×4=100

420 Mc.-2 local qso's-2×50=100

Total gso's-34+25+2=61

Activity bonus-61-25= 36

Total-270

Ve3AID-235 Mc.-19 local qso's-19×10=190 Plus past score of 20= 20

Total-210

Ve3AJS- 50 Mc.-79 local qso's-79×1=79 15 dx qso's-15×4=60

Total qso's-79+15=94

Activity bonus 94 25=69 Total-208

The above should indicate how easy it is to pile up a sizeable score in several different ways. As you can see, the information can be put on the back of a post card, so what are you waiting for?

BEAT NOTES

Ve2XR on 80 and Ve2WK on 40 were topscorers on each of these bands in the CAROA "4 in 1" contest of Feb. 7 and 8, making them both certificate winners. The odd part of it all is, believe it or not, is that XR did all the operating for both winners! How, Well, XR was on 80 at night only, as naturally the band is NG during the day. Realizing the usual lack of Ve2 in most 'any contest, XR approached WK, who couldn't go on the air, and asked his permission to add one more Ve2 to the battle. That's how it went, Two wins by one operator!

W.A.R.C. HAMFEST-SEPT. 12

WITH the many compliments concerning last year's hamfest still ringing in their ears, members of the Winnipeg Amateur Radio Club are planning on going all out to make this year's "do" one that will go down in the history of Manitoba and even Canadian amateur radio as "the best ever." Looking after the organization of this year's hamfest is a committee made up of Darcy Langtree, 4DY: Ken Williamson, 4KW, and Jerry Walsh, 4GW.

Sept. 12 is the big day when all the radiominded people of Winnipeg and vicinity will gather at the St. Vital fair grounds for the day's festivities.

Included on the program will be special features for yl's, xyl's and children, exhibits by various commercial radio firms, sports, judging of equipment on low frequencies, with a special award going to the ham coming from the farthest distance and, of course, the ticket draws for valuable equipment. The program will commence at 11 a.m.

Although final details have not as yet been completed, the committee is confident that it has a program lined up which will appeal to everyone, young and old, radioman or layman. All that's needed now is the support.

OVE

CAROA Official Broadcasts 75 Meters Each Thursday 9 p.m. Local Time

The undersigned stations have been appointed as CAROA Official Broadcast Be sure to listen for your Stations. district OBS for latest messages and bulletins of interest to all Canadian amateurs.

Ve1GD—3835 Kc—H. A. Garland Ve2HL—3809 Kc—J. W. Labelle Ve2DL—3827 Kc—R. Frenette Ve3QB—3835 Kc—W. B. Knowles

Ve3CP-3775 Kc-T. Hunter Ve4KK-3820 Kc-B, Fowler

Ve5FA—3848 Kc—W. A. G. Simpson Ve5GA—3847 Kc—W. T. Rogers Ve6OD—3801 Kc—E. A. Anderson Ve7FB—3825 Kc—H. E. Savage

Ve8AS-3820 Ke-J. Spall

*-10:00 p.m.

NATIONAL

Ve1

Ronald J. Hesler, Velks, D.R., Bux 150, Sackville, N.B.—1B. secretary-treasurer of the Trura Citab, has been transferred to Halifax, and KN is his successor. DK has been heard on 20 CW. NZ appears to have had considerable trauble pushing his Kaiser the past winter. GK is rumored to be about ready to throw the switch on new half-gailon. CB claims that he has pre-wer WAC but is unable to find that clusive Asian card. QK is building up a sis-meter xmit-receiver AM-PM. EQ, who hasn't been too active of late, will some be on 20 with an SOT. MT is rudishing fot of G's the past while. KN received his WAS certificate and needs Asia for WAC. Gordon Pardy of Truro har a bet on with Alian Donnethat the will get his theeth first. Tru KK has been too active of late, will seen be on 20 and 40 CW. WK is already causing QRM on 80 C.W using an AT-1. AQ, formur secretary of the Lakeburn Clab, has been transferred to Montreal. MV is happy now with the newly-acquired BC-348R but discontented with the AT-12 xmir which he does not dare use for some reason or another. PA is now running 42 kw. but unfortunately he having trouble zetting his acrial to take it; he is also the proisid owner of a 25 km., m. certificate from A.A.R.L. DG and xyl Joan run dual operation, and when the om is away at work the old girl takes over and does he get meals on QSL cards. Joan is a former R.C.A.F. radio operator and holds a commercial taket. Th. or should we say ex-TR, an old-time in home calle. has seven up the works in Gwor of the first order. BF is active on 20 and 80 phone. On is at the present time in Pre-wick, England, visible the G's. BL. located in Scoudouc, is active on 20. SE is QRX while the builds a new house. QR and QG are on 10 using NBFM. RL is building a new ris. SI is using a 19 set as a sit. OK is Ronocking off the dw with a pair of \$13.5 a. SO is doing well with his 19 set, using his on 80. AF is having trouble lately with filter condenses. RU is operating 20 CW with a now bug. MS is running a pair of El118's on 80 CW and well might

Attention two-meter fans: GQ and RQ and LJ are now on two meters and would like to make test schedules. Three Yarmouth hams and one in St. Andrews (ER) are interested in 19ads, too, so why not get together and see what you can do, and when you do it how about dropping Gard. Colaman a note letting him know how you make out (VHF, editor of XTAL).

DON'T FORGET THE BIG HAM REUNION FOR THE MARITIMES AND OUR NEW ENGLAND NEIGHBORS ST. JOHN, N.B., SATI'RDAY, SEPT. 1. MORE DETAILS IN LATER ISSUES OF XTAL, MEANTIME TALK IT UP GANG, AND LET'S ALL BE IN ST. JOHN ON THE "GLORIOUS" FOURTH.

TALK IT UP GANG, AND LET'S ALL BE IN ST. JOHN ON THE "GLORIOUS" FOURTH.

KQ in Bathnest sends along a newsy letter and claims that he is the only ham on the North American continent who is using a water-cooled crystal. PII now has the lower line to feed his 507 on 50 meters. UD is a new call in Moneton on 80 and, according to reports, is QRM'ing G's locally in G land. GB is active on 40 CW. QU is operating 75 fone. UL, a blind operator in Bathnest, continues to toll them in—his latest dx is a VSs in the Virgin Islands. DJ wingles along on 20 and 50 and is a dx hound. DU has given up 71 fone for tild present in order to give 20 tone a going over. UII, an engineer at CKNB in Fredericton, has been on 80 all winter and is now elaming a QRM "buster" for 1949. HW has rebuilt his 75 fone ric. DT is how in Marathon, Ont., has the new call of Vasiin and expects to be on 10 and 20 shortly. FZ using low power and a three element rotary beam is knocking off the Europeans and uses an Sti fone once in a while and did spend some time on 10 CW, for many many years, has been hand on 75 fone! GL, the A.R.R.L. traffic manuager, is the Maritima member of the Trans-Canada net on 30 CW. NY is operating 30 and 40 CW. KS actually took traffic on CW from KQ1 IX has completed his studies at Mount Allison and ince pulled out for Ve3 land. KT basn't been heard around since 10 folded up for the seasor-occived his enxincering vertificate from Mount Allison recently.

HV (ex) has again changed his call—is now Ve2DK and operates on 75 and 20 fone and CW. VY now has a Hallierafters SX-18 receiver and operates on 80 CW. VZ acted as an interpreter at the International Trude Fair in Toronto. DC is mitting on a 28-meter beam and hopes to be active soon on this band. KS and V2 are planning to operate 75 fone portable from their summer from at Cape Toronomips this summer will have about 25 watts fone and 75 watts on CW.

I have been asked by the publisher of the Radio Amstein Call Book to act as a clearing station for new calls, changes and errors in QRA, etc. If inflyiduals and club secretaries would advise me of new calls, together with QTH, etc., I shall be pleased to collate these and forward to the rabilication in order that you will be correctly listed in the new editions of the Call Book. It is highly desirable that we are all listed correctly in the Call Book so that some of those valuable dx (?) cards do not go astray. May I have your co-operation please—simply place the following information on a gostcard: Call letters, ex-calls, name (first, middle and last, please), and complete address. 73 Ron.

Ve2

Floyd G. Gribben, Vc2XR, D.R., 5120 Westbury Ave., Montreal, Que., Phone EL. 5387—Hello, gang! If you're complaining because it's too hot, then be thankful the temperature ian't so high that you have to resolder the rig! Forget the heat! Sit back and gander here to see what's been doing in Ve2 land. TM. Leen Baldwin, of Quebec, gave the postman the job of hitneing an fill letter to us this month. Here's what Leon had to say. LA, Tony Gulmond, turns out the finest commercial looking gear for miles around. Tony is heard on 80 and 10 phone over ZL'a rig (built by Tony) which is one of the snappiest layouts in the land, LA is rigging up a 32-

clement (VHF bedspring) beam for two meters. Leon goes on to say that 50 per cent of the technical staff at GRV transmitter at Clari-sebourg are harms and that couldy enough the transmitter house number is 73! Claude Doatie now has the call ZN. Claude put aff remewing his lice is e too long and leet his old call of NW. HB boils it six-meter rig that looks like a factory job and will help in gettling a 20-meter antenna lack un. TM answered the prayers of LO in Drummondville who wasted a Quebes traffic outlet on 40. Leon is also working on 1UD in Monebon to act as an N.B., outlet Leon works at the C.B.C. stallos in Quebec and says he worked ACI in Chicontini who is a yl member of the C.B.C. staff at GBJ studios. Her QSO with TM was her first contact with a fellow C.B.C.e. Hey. ACI, how shout looking for other staffers? XR and 6M of Keefer for instance! On 50 that Is, IW is now heard on 80 and 10 whone as well as 40 CW and has antenna troubles. TN should be on as soon as he gets his antenna up. He's having bleeder brouble. His power supply needs a transfusion. LZ is heard regularly on 80 phone. With the aid of Virginia, his xyl, his QSO's are often more run than a Jack Benny procram! That is the works from TM. Many thanks tor writing, Leon. The Montreal Amateur Radio Clob held their has meeting on May 26 before colsing down for the summer. CO. Lindsey Meet's, gave the boys a pep talk on Field Day preparations. EW, Ray Stiles, gave a very interesting talk on microphones and amplifiers. Is, Art Dingman, did an high of thanking Mr. Stiles for presentiac his timely topic. CC. Guy Le Port of 1249 Chevalier St. In Cartier-ville, won a BC-686 YFO rig via a draw. It was the main prize, of many for the evening. Guy has been rock-bound on 80 CW. Now you'll hear the guy all over the place, including FM phone. BEEF DEPT. . . Many for you complain that there isn't enough technical dope in XTAL. Have any of you eyer considered that the fault may be due to YOU? Any magnatine is only as interesting as its contributors make it! Th

wanid like to. If you ever hear Ed it'll be coming from 5116 Charcanald Aye, in Montreal.

If you happen to hear ACP from 6th St. in Val d'Or. i'll be Jallen Trenanier, who operates a 19 set when he's not hany at the controls as projectionist at a Val d'Or movie house. That walloping signal from SC comes from a pair of 100TH's owned by Charles E. Dunlop, c'or Perron Mines in Perron. If you call Chuck, he'll most likely hear you on an HRO. LO, a most reliable letter writer to this column, sends in his usual welcome contribution. John hails from Drummandville and appears to be the real OT of the district (a Grunddad, toal) John says he is quite pleased to have at last craised a Quebec City outlet for his 40-meter traffic. TM is the gay taking John's stuff. John says he handled a measage from Japan. TD, also of Drummondville, works 40 but tried 20 only to blow two RF chokes due to excess soon around the rig. The RLI, passed through Drummondville, spends his time on 20 CW and still knop husy with the Rover Scotts. LO says a recent QSO on 40 ended with 85% being extended to him but he wallan't say who the sweet thing was on the other and of the QSO. John says for us to keep an ear peeled (for the sweetest QSO this side of heaven!) for her, Quit jams ming the hand, men! XR sporting new Bendix TA-12C rig. It looks like Tomny will seen be Bendix TA-12C rig. It looks like Tomny will seen be beard with more gock from Verdun. RN of Sherbreake runs 70 waits to a Marconl 11-5 dutiff and gets the noise on an HRO. Give Harry a call on 80 CW. PK is now on 20 phone after leaving 10, where he first was introduced to hom radio. It's interesting to note that not all XTAL's sea read by any Ves for this time we have from WayGR.

Jack Lown, ex-Ve3dL, ex-Ve3dL, of 247 South Wheeling St., Toledo, Ohio. Jack says he's trying for a WAYE

Certificate (aponagred by CAROA) and wants Ve2 contacts on 26 CW. How about helping Jack out, gang? Please give him a call, he'd appreciate it. OA of Montreal gives 80 CW a rest and takes to phone on the again band. PT of Verdun is familiar voice or same band. CB, KN, UM, ACU, ADD and ABF hammer away on 40 while AEO, NU, AEO and ACM do the savid churus

cent gives 20 CW a rest and takes to phone on the same band. CB, KN, UM, ACU; ADD and ABF barmer away on to white AEO, NU, AEQ and ACM do the anvit churus on 30.

CJ does his phonics on 20, NZ, known as Romolo G, J. Fistono, of 11 Jasper Ave., in Moant Royal, plays with a Hallicrefters 117-9 at 75, watts, an SX-42 received and a 41, beam, all tuped up on ten phone. Then we may a AW. George W. Richards of 115, Oak St., St. Lambert, who uses a VFD and 30 watts to an 867 on 46 and hault 'em in on a Moreoni R-1165 rect.' U. In Ville St. Laurent see find AEX, without 18-16 for 18-16 and hault 'em in on a Moreoni R-1165 rect.' U. In Ville St. Laurent see find AEX, without 18-16 and hault 'em in on a Moreoni R-1165 rect.' U. In Ville St. Laurent see find AEX, without 18-16 and hault 'em in on a Moreoni R-1165 rect.' U. In Ville St. Laurent see find AEX, without 18-16 and hault 'em in on a Moreoni R-1165 rect.' U. In Ville St. Laurent see find AEX, without 18-16 and hault 'em in on a Moreoni R-1165 rect.' U. In Ville St. Laurent see find AEX, without 18-16 and hault 'em in on a single see and heart the boys on hie AEC-5 rects,' Swinging over to 14 Clement Ave. in Dorval we run in to R. R. (Peter) Snith, who culls himself AAV with the nid of two 80% in the find on 6 and 16 phone. Coming back to the hig city we luming in to a telephone sompany man known as Benck B, Wilcox who proudly displays His cuti of AEW from 385. Barcelay Ave. in Montreal. He less the box from 385. Barcelay Ave. in Montreal. He less the box from 385. Barcelay Ave. in Montreal. He less the box from 385. Barcelay Ave. in Montreal. On 80 we might been Autice Baribeau of field Third Ave. in Rosemonia who signs ARG with a 19 set. Or we sould flear YE on 80 phone. The maintan of to past Daywood in deliver a very nice letter from ABS, Herbert A. Shaw, of F.O. Hox 132 and 18-16 and heart yet on the rect of the AEW from 385. P.O. Hox 132 and 18-16 and heart yet on a series of the proper seed of the AEW from 385. P.O. Hox 132 and 18-16 and 18-16 and 18-16 and

Nice going, Guy! Here's the rest of his news. ACL, Maurico Cousineaup, of Val D'Or, uses a 10 set. ABP, AM'ced Lauzen, of La Sarre is ABU known as Jean and an S10. His son Guy is ACT and also has a 18 set. Another new ham in La Sarre is ABU known as Jean Langevin who sparts a 19 set. Now we know where all these 19 sets went! Thanks for the letter, Guy. LOUIB THE LID SEZ . . . "My sister must have had an all-band job dans at the local heauty salon 'caose her dome is covered with coils!" (65-6h-6h-6h-sh-shy "in!) If you deal with Bill McKim at Canadian Electrical's Mantreal store, take note that he now signs MK and uses a Harvey-Wells TBS-50 on 10 phone. New hamping popular up all over the place. Here's a few who live in the married quarters of the old warrine R.C.A.F. depot in Lachine. One lad is ACZ, Set. C. F. Coslex, whom the hoys affectionately call "Cookie," He rous is watte on 81 and 170 on 20 GW and hears the poison a BC-393. Then we have David Bell, AEQ, who runs 25 wents to a RC-855A and draws in the stuff on an HRO. Right next describe reminers of the R.C.A.F. Transport Squadion. They say that they like QSL's sent to them c/o R.C.A.F. 248 Squa, Dorval, SU takes to 80 phone using 25 watts on an 80' cathode mediated with 'A679. It mass the same style of mod. for his 80 phone rig. JJ thomb his none at RCf.'s now that he has a Sonar XE-10 NBFM and to his ten phone. DL is studying suppressed carrier (the high power boys sure suppress his 10 watt one!). Don't forçet that DL is the CAROA Official Broadcaster for Montreal area. Hear the latest in Ve ham news Thursian supplies and the rige from a reas outpine generator. His bose away from all the QRN by operating his 814 phone religions in receive since lates the Line beaus. Lef of verteberos is heard the odd time on 80 phone with set in the latest in the rige from a reas outpine generator. His book overlooks the very unley Snowdon Junction in Montreal. After visiting a hunch of the Very he's decided that the antenna for him he as two third pone with a set of t

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group on their own make the F. D. their affair from the Brome Lake area. Watch is later issue of XTAL for the results of their havif work. Well, gang, this is where I sign, so now you can read on. Don't forget to read the other fellow's cultums too. They write up interesting dope on our fellow Ve's in other districts. See what they have to say. Have nice holidays all. See you here in the August issue, —73.—Floyd.

Ve3

Due to circumstances beyond his control, we are informed, VeaWX is anable to carry on with his daties as D.R. and regrets that he must resign from this post, On behalf of the Vea hams, HQ wishes to thank Bob for his past services. This vacancy in our establishmeat has already been filled and HQ takes pleasure in announcing the appointment of rour new Vea D.R.—announcing the appointment of rour new test over two years and has headled about 760 messages, also EK has skeds with 9NW, at Clyde River, Baffin Island, for over two years and has headled about 760 messages, also EK has a BC layout, EE is building a new house for himself, syl and junior one. (the main room is, at concer, the radio toom). Is it heigh made sound proof? BWY is going to give some of the keys a run for their money in the dx line. YJ and QC visited QR for a few minutes on May 24. WZ is on 75 phone from cattage on the shares of the Rideau Laken. There are a few choice dx curds at the Ve3 QSL hursou looking for owners. This is about all the nows we have been able to collect since receiving the supointment as your D.R. a counte of days are. I hope to be able to have a good lineau for mext menth, and am looking forward to your co-operation in this, for the success of the viction goad in Toronto in lots of time. Summer, with the strong attraction of autidom netivities, has not driven the Beaver Net off the sin. The eversathful Ve3DU and Ve3ATR are there every night, with other members of the pat heigh QNI whenever possible, which augures well for the future of this sig-claysacyear traffic organization, Amateure with streffic for CAROA, who has a member of the suc ATR raports traffic total of 11, BCF7, APS 13. The Lowlow club participated in the field day with customary cood time by 35. 73—Bert

Ve4

Les Saul, VeiFI, DR, St. James, Man.—St. Bonifano is becoming a real hant town. Lanest additions are MR, BB, RS, and HE. Welcome to the madhouse OM's. Of the ten ope active, five are toon-age. MR works EL two blocks away on 20 using a tritet sile and no autenme. BR gats out on 20 and 40 simultaneously with a 40-meter rig and 20-meter folded dirole. Comprast of HB, latest addition to St. James. DL raves over his bob-trilled beam, good for receiving and transmitting. Bex. sold his revy to BB and plans building a new one and rebuilding the xmu all in one rack. How he'll get that 450-west rig a size smaller is a question. MR is ioning sleen trying to design a rig to operate from 80 through 25₀. He did get a 16 meter beam from SJ, however. What about the other bands 77 AT has that new hay on the air. (IW plans on remodelfing the shacks. He's getting astonishing results from a home-made preselector. Now the S-meter never diss below 10 db over S9. DO is hnocking himself out trying to get all that power into his 29 meter three-element beam. NZ works the ONA boys with 25 watts to a Zero. EL pared a foot off his doublet and succeeded in working his first 4a. VR, ZL and ON's that is. DP his messed his QTH. SS is now with the C.B.C. LC is not fill be finde what choused all the blue amake the other day. SJ is leaving for Vefa we understand. BM is back in 20 after the winter on 19. CX has changed his QRA to the west end of Winnipur. DG gets on 20 mismo accasionally. DL is phyring with phase mechalistion. DO has gone to Shife. EL is goline on 20 with NRFM. RW is braving 20 with only 35 watts. MC has finally required ble twin triplex. The is ming NRFM now. FW to sign Vefa soon. AM moved his amer. Now he's trying to get it together again. FK has a new home-made try. DY is thinking of six meters. GW wants ideas for the hamfest. Come on, fellows, cough it up while there's time. LL and distherney machines don't agree. The hows held a party for SJ prior to his departure for Hamlin, Sask, Prevent were SH, JE, SJ, DP, GL, TB, WR. A

NN, LC. DP and (II have combined station at GPs QTH. Plans are to have a ris on 10 and on 26. GI, aided by DP. 35 busy putting up a dual 10-20 beam with a 40-foot lettice tower also planned, IU's WAC or bust. SH finally cave in and slid down to 20 where he man 300 watts to a doublet. LF, another all reliable on 10, succumbed to the lure of 20 with 100 watts to a doublet. TR beat the slical hour rap by switching to NBFM with 285 watts from an 813 to a three-element beam on 20. EX reports learing some W's on six but sgritten miss wheel them out before they signed and he have! feeed them since. FU has shifted to 20 with 285 watts, an 813 and an indeed of the doublet. SH reports that most of the boys have left 10 since it has got specify and there's very little doing. Our sincere thanks to SH, GW and EL. The hoys are really indispensable in this department, 73—Les. NX, LC, DP and GI have combined station at GPs QTH

Bill Gordon, Ve5MW, DR, Oxhow, Sask. RB has only one holby, than of amateur radio. Ray committed himself one day by stating that be wants somebody sitting beside him to help him operate in more ways than one. Ray specifies that he wants somebody with the new look. So there you are gals—he can be had!

PS, CO, HB and NC are on six, mostly for head rayshews. JV and OC at Regen simulate up plenty six, all in Mosse Jaw is new ham on 40. LV is looping tubing for a beam. BF wrote us a very nice letter which we present herewith to show you what a column we could have if each of you sent us one like it—"Trying to think up a good lie to defend my lare trophy at the Regims hamfest. Blew a hole in the class envelope of one of my \$11's you could stick a penell in. Only had the \$11's no local stick a penell in. Only had the \$11's noteroid and the \$11's for rough for \$11's, Usings SBFM on 10-11-29-75. Fair results, but you don't make as many dx contacts. Only interesting dx was VQSMGE. (the Hallierafters Expedition). Am Ilparing on sly maters for the summer." So there you are follows: If each of you sent un a lotter like that, we could fill XTAL. Simple, in 'ti', RB is using NBFM on 75 now.

In closing let me wish all of you a good time at the Regima hamfest. If we know the Regima armay, you won't have anything else but. 73—Bill.

Ve6

W. R. Savage, Ve6EO, DR, 329 15th St. N., Leth-bridge, Altn.—WTEQM is anxious to know how many Canadian hums intend to go to the Glacker Hamfest this year. He said he really enjoyed himself at the Waterton Lakes humfest last year. ND, ex-7NL, is now located in Calgary and has his rig going on 75 fone. It seems that Norm can't keep away from Calgary. AG is a new ham at Lacombe with the new C.B.C. station. Roy is ex-IQF.



The plaque unveiled at Lethbridge in memory of Ve6WC

ID has a new jr on, and I think he will be handing out cigars at the Hamfest this year, so be sure to be there, fellows. FK is trying out NRPM, which seems to be working out very nice for him. OD has rebuilt a Bendix TA12 transmitter which is doing a fine job. He built a speech amp and modulator in the same cabinet. After paying a visit to the residence of AC we gathered the opinion that Elizabeth must have dug the hole and mixed the cement for him to be able to get his 19 mtr beam up. CY is a busy man with his new shop. He also installed the PM radio system for the Calgary Electric Dept. GD is holding a regular morning sked with a ZS and it is working out nicely. HQ is a busy fellow trying to sort

but War Asset equipment so the boys know what they are buying. JV is now going nebble; yes, he is building a mobile outfilt. AB is still trying for new dis stations. KII says she has been isolated so long by snow and rain that she won't know how to act when the time comes to go to the bir city. Also without plane service they would have starved to death. EO received a wonderful latter from VP9E, who states that when he calls a CO be can't work any one, because they all than on his free and call him. My stal was about 3 Ke off and it worked th. Why not try it, fellows? NW is looking for dy cards. Suce was pleased to meet you when he Calgary. OX is working some dx on ten, MN has taken down his 10 mtr beam and 1s putting up a 20 mtr boam. 7LB, e2-6JP, who is now living in Vancouver, well yours truly a very nice letter. While he likes the rain and fog at the coast, I think he is a little home-rick for the prairies, also the good old Gyp Joint. BU thinks the QSL Buseau is doing a super job. He must be getting some of those choice cards, though, by I has really been a husy boy, He has pointed and malled out nearly 200 fotos to hams who made contributions to the plaque which was accetted in memory of Cup. Bill Collins (ex-GWC). Thanks to all the work, Jessop. I am sure overyone appreciates it very much. RD and LD are husy swranging the Lethbridge loys for a field day and for the display at the Exhibition, CE is on his helidays and is visiting several hum stations. MA has a new 1948 ir, op. Well, fellows, how shoot some information for next issue? 7.3—Bill.

Ve7

Ernie Savage, Ve7PB, DR, 4553 12th Ave. W., Vancouver, B.C., —Well, there for two new funior operators in B.C. and only one hus reported in that is a new son for ALQ Art and he will nave to be getting on the air scorn tow so that his two sons can have an early start. AFM Wally has most of his start here now; 1,800 pounds of seas actived from Eagland, and with it was records. Net one was benken or chipped and that is a resord for traight. PO. Clarence, the fellow who has been spending lik time talking to Clarence, the fellow who has been spending lik time talking to Clarence, the fellow who has been spending lik time talking to Clarence, the fellow who has been spending lik time talking to Clarence, the fellow who has been spending lik time talking to Clarence, the fellow who has been spending lik time talking to Clarence, the fellow who has been spending lik time talking. It is not the has been spending like time talking to the head has no the Br.C. Police. They don't like bits on their PM transmitter freezes, but he was distressing a person's programs and they told the paper about the another than bether their radio. So he sets the front page citation, DR. Bill, and DF. Nelson, were keerd, traded eags for hatching. Wonder what is batching now between Oliver and Stevenson. DD. Ceell, were haven. The feel of the feel of the talk than the feel of the start in the net and then diving out to die the garden. ABO has a text receiver HQL2IX and is heard to the small hours working the feel of the wildest network on this lade of the free Cartain, is still working on his new rig which is going into one of those steel cabinets with doors and all. The old rack is going to hook, BJ, Ed, the able master of the wildest network on this lade of the free for the key free for those little burdles, with ADF Bill's xyl finding the two-dollar valve hanging on a little piece of atring obtain a park from Ed, thanks. The Vancouver Amsteur Radio Club's Junk transmitter sontest class that mont of June for sure and heaver town to town. AF

Collingwood club members had the privilege of visiting the new FM station in the New Vancouver Hotel. A fine lecture on the FM was given by Mr. A. B. Ellis, the

regional enigneer. Then a tour of the CBR studios was conducted by control operator. Bill Howard, GH. The great musical talents of the club members were demonstrated in the main studio by a small and very original concert (not breadcast). We would like to congranulate the V.A.R.C. for the fine time shown to everyone at their dance. AZ, Jack, is having troubles building two-meter receiver. We hope to see AAK and OJ sparting beams on ten soon. Wonder how much more we have to blab to convince them dipoles on ten are like digging with a teaspoon. AIH building new tower and six element beam for ten. He says he is through with speech clipping for life. (Woll. why not write a story for CAROA on the reason that you are through with the see all can see the reason. AME, Doug, is running about 45 watts on two meters new ABP also on two meters. How can an old pumphandler like rou know what to say into a mike. Jim? Thought Gravel Gertie was on ten the other night—but when she signed—if turned out to be MH. He still getting those choice 20 meter dx cards from Russis, etc. It has been said that he used to eatheraktast with the case on and key in hand and with the spare hand showel in the grub; went over big with the wife. ABL has the learn in the middle of the foundation for his new house but no visible developments in either house or beam for long time now. AJR too busy washing dishes, etc., to do any hamming (right, Spad 2). AJP gone fishing, we think—or has be left with spring fever? XT has two-element beam on 20, about 27 feet high. LF ironing out the bugs from PP/S13 for 20 CW. The neighbors have yet to bear the clicks from that full gallon. ADV trunings S97 rig mobile on ten—we hear he has six antennas at home. Ex-VefAER-VefAJY, now VefAFI, Harry, is cuoning a real fine all-band rig from Kamboops. The S.O.R.C. annual meeting of the club consisted of a very fine social evening boosted by the April and the election of officers. President, FD. Dud Hatcher: ZE-syi, secretary-treasurer. Verona is the handle. The ham see the

Remember, July 13, 1947, when the V.A.R.C. not lost with transmitter and was found in hour or so? Also the beach party? Well, it is coming again this year. Are you ready this time??

Alberni District Amateur Radio Club meetings held 8 n.m. the first Wednesday of every month in the wireless room of local Reserve Unit Army Camp, Port Alberni. Visiting amateurs cordially invited. AAZ. Nobby, of Victoria, paid the twin cities, Alberni and Port, a visit Wednesday, Apr. 28, to see his son Tommy, who is sick in hospital here, accompanied by his wife, Vernar, and also called in on CX, Stan. and Betty and ACW. Cy and Connie. Cy is still crying. "Go sway, Nobby." Nobby left Cy's rig in little pieces. Heard before of those kind of guests!

ADV, Jim, same night dropped into Cy's. Jimmy installs and services transmitter for Spillsbury and Herburn (Hep, Ve7HP). PO, Clarence, and AEK. Dick, paid a flying visit to Alberni and Port, to roll some

Correction!

We regret that owing to a printing error in the Lamar Co. ad in last issue an incorrect address was given. It should read:

> LAMAR COMPANY 1497 Wellington St., MONTREAL

movies for the B.C. good-will. ACW, Cy, is still on the five o'clock not and again has the idea to rebuild, to go with the new receiver that is doing the good job of beating the noise. CX. Stan, gets on occasionally, but he's rather busy, with house building, gardening and having to work nights. BB has greenling at termites in his rig or sampin', but expects to get bosy soon and chase them not. HE. Teddy, "Happy Engineer" is on twenty phone; no word what he is working but do know that his fishing line is bringing in good results. HJ. Challie, our young fellow, has been on 75 phone. Glad to know you made the grade. Charlie is 75 years young, PY, have, is active on 20 phone and be won't speak either on any dx. Have you leard a fone man struggling on CW! Well, that was our DZ, Muxio, and he has done it and made a hum out of his student many miles away. Don't know, but congrats to you Max and superfect dx to you. AOG, Busten, at Franklin River. Oliver Radio Clob has been at a low ebb in the radio work but plenty busy in their trade and that is in farmer. Most members are fruit growers and the spring rush is on, and what weather to work in. MC, Milton, has the power supply finished for that full gellon, but is langually in the finished for that full gellon, but is langualling a new house. Wonder if it is for the gallon? DB, Bill, and ZL, "Wille's Pudale' Bob made it possible for Tommy to chin way with folks from home. The president for the West Summerland Rudio Club made the was caught in the rain down at Oliver he made DB, Bill, a pre-selector for his Sky Boddy so he can't hear McCord Airways in the middle of the Tometer band. Bill does give credit and says it does work.

White Rock by the Sea reports much activity in amateur movements. DZ, Maxie, who held down this

McCord Airways in the middle of the 75 meter band. Bill does give credit ind says it does work.

White Rock by the Sea reports much activity in amateur movements. DZ. Maxie, who held down this most south-westerly tip of the mainland reports be is losing that honour and have AOP who held Vol. Vo2. Ve5 calls and CW on 80 and 40 and 20. AIZ on 80-40 CW, YV on 80 and 40. Then there are several ex-hams who soon will feel the change in the air. There are several yf's who are learning the code and all. MX works 80-40-20 fone and CW. Your official bulletins are transmitted on \$850 Ke near 1800 hrs on Thursdays, and we try to find a hole between 3820 Ke and 3225 Ke at 2108 hrs. ANM is another new call from Alberni. MQ, Archie, has up that new hearn and is heard on 15 fone. Some person or persons have heard OT, Marvin, on CW. YI, Wes, has been blowing hard us to the current he has been pouring into the 807 and getting away with it, till some fellow didn't believe it and proved his mil-meter was not working. Poor Bill. DE, Barry, has been lessed with nice signal and powered by gas generator. AAZ, Nobby, has been working hard us to the current he rig sound like a local transmitter instead of a transmitter station, and the reports you receive give you hopes. CB, Chrt., is rebuilding and it seems when floished it will be a small parcel with plenty of punch in it. Please let's bear from you often, gung, 72—Ernie.

Ve8

Jack Spall, VeSAS, DR, Box 268, Whitehorse, Y.T.—VeSAK at Teslin walked the aisle during May. We wish Bob and his xyl the very best for the coming years-VeSBM, also of Teslin, 18 Roping to he moved shortly to the bright lights. SCE, of Dawson City, openues 40 and 20 with parallel 807's, SCG, also Dawson City, uses same Dawson Cityite, used a 19 set on 75 but now rebailding to parallel 807's for 80 and 40. Dawson City is soon to have another well-known VeS in the form of VeSAY, who is moving to the fair city this month. George is well-known for his dxing on 20 and 40, using PP 813's in the final, SAO of Lac LeBarge now is sporting a Vestam Soo feet on each leg. His xyl helped bim string it. 8BL leaving soon for a month's holidays outside. SAL busy republifiers to 807's in parallel with bufft-in scope for mod, indicator. Fred says he has been too busy and lack of info so had to cancel publication of the VeS drift, but hopes to have a copy out soon. SAN returned to town after extended trips for customs dept, and expects to go places with his new SX43 revr. SBB still QRT for lack of time to fluish his PP813 rig., Several mey have a som soon to add to the QRM. SAW, the nie dxer, claims WAZ and 132 contries post-war. Lyle sez he needs only one more eard to complete confirmations of his WAZ. SAS has been on 20 since April with PP813. Jack very bitsy now building three-elm relary for 20. Still waiting for news from the N.W.T. gang, so hw sht dropping or a port ing for you to send in self-addressed envelope to claim them. Swe some mones to not send in self-addressed envelope to claim them. Jack Spall, VesAS, DR, Box 268, Whitehorse, Y.T.—eSAK at Teslin walked the airle during May. We wish for you to send in self-addressed envelopes to claim them. Sake some money by writing in a report and enclosing an envelope for those QSL cards. "I and CU next month-Jack.

Introducing Your DR . . .

W. R. SAVAGE, Ve6EO

This month we introduce Bill Savage of Lethbridge, Alta. He was born in 1908 in London, Eng., coming to Canada at the ripe age of one year. Although Bill became interested in radio when only 12 years old, it was not till 1932 that he went on the air. His first contact was on 80 meter CW with K6VG, which augured well for his ham career.

At present Ve6EO runs about 200 watts to PPT40's in the final, crystal controlled. For phone work on 20 and 75 meters he modulates with a pair of TZ20's and runs CW on 20, 40 and 80. The receiver is an SX 23,



Not satisfied with this nice layout, he is building another rig using an 813 in the final for 10 and 20 meter work.

Bill is WAC on CW and phone - WAS and WBE and DXCC. He has held ORS and OBS appointments with ARRL and at present is the Ve6 QSL manager!

When not working at ham radio his occupation is city electrician in charge of the Lethbridge Electrical Inspection and Meter Depts.

Married to a wonderful xyl (who always has the coffee ready in a contest) he has three children.

We are glad to introduce Ve6EA and extend our best wishes and thanks for his good work.

LATE AGAIN!

We are late with XTAL again. A long weekend over the July 1 holiday, and a week's plant holiday starting July 19, has knocked the schedule of the printer, and us, into a cocked hat. Now we start all over again to get on a mailing schedule of the 15th of the month of issue.

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Ve3BVD-H. F. Jones, 2140 5th Ave. W., Owen Sound.

Ve3BVE-J. A. Coons, 50 King William St., Huntsville.

Ve3BVF-W, F. Fowler, Foleyet

Ve3BVG-E. Bray, Box 785, Huntsville,

Ve3BVH-R. L. Kirby, General Delivery;

Ve3BVI-P. O. Jones, c/o 94 Grant Ave., Hamilton.

Ve3BVJ-Margaret J. Calder, 351 Princess Ave., London.

Ve3BVK-E. G. Rooke, 157 Wellington St., St. Thomas.

Ve3BVL—S. S. Whiteford, 199 Victoria St., Ingersoll.

Ve3BVM—C. M. Heddington, 12 Major St., London.

Ve3BVN—E. K. Long, R.R. No. 2, Freeman. Ve3BVO—A, E. Holmes, 398 Whaincliffe Rd. S., London.

Ve3BVP-R. L. Gilbert, 522 Piccadilly St., London.

Ve3BVQ-H. C. Moon, 7 Humberview Cres., Weston.

Ve3BVR-F. M. Struke, 24 Argyle St., Stratford.

Vc3BVS-M. B. E. Racey, Box 173, Lucan. Ve3BVT-Frances Mary Tamblin, 20 Jean St., Port Arthur.

Ve3BVU—D, M. Davies, 2455 Clemenceau Blvd., Sandwich E.

Ve3BVV—A, G, Barker, R.R. 3, Weston. Ve3BVW—W, M. Bryant, 511 King St.,

Ve3BVX—J, E, Thomas, 167 East St., Delhi. Ve3BVY—G. E. Panter, 16 Onaway Road, Port Credit.

QSY to page 22

GODERICH PICNIC

The Goderich picnic will be held on Sunday, August 8, at Point Farm, two miles north of Goderich on No. 21 highway. All hams, phone and CW, their xyls, yls and jr, ops, are welcome. No admission. Just bring your own grub. Tea, coffee, milk and ice cream served free.

DX-From Page 11

time he has used it has had some nice reports from it. Vince is another one of the low-power boys and runs 40 watts to a long wire most of the time. VP3ACS and VU2BX are recent contacts with this. Ve3AGC has been busy with KM6AB, MD5KW, TRIP, VR5IP and lots of others. He's also waiting cards for DXCC. Ve5JV works VQ3, Z8, ZE, QQ, KM, KG, C7, UA9 and a bunch of Europeans. Ve3AVA adds SV1RX, UA1KED (Franz Joseph Land) and UD6BM. That's the dope for this month, and can use more reports, boys, so what say.

DX PW Totals

VE3QD	163	Ve1AQ	84
Ve4RO	161	Ve7EH	77
Ve7HC	151	Ve3TB	73
Ve3IJ	123	Ve3BBZ	72
VelEA	120	Ve5JV	72
Ve2WW	111	Ve3BBN	70
Ve3AGC	108	Ve1NE	66
Ve1PQ	106	Ve3QB	65
Ve3AVA	103	Ve6AO	64
Ve3AAZ	102	Ve3BWY	61
Ve3ACS	100	Ve4RP	55
VO6EP	100	Ve3BHX	54
Ve6FK	93	Ve8AS	53

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NEW CALLS-From Page 20

Ve3BVZ-E, D. Bradt, 1428 Bruce Ave., Windsor.

Ve3BWA-A. R. Anderson, 211 Roslin Ave., Toronto.

Ve3BWB-W. A. Legott, 50 McMillan Dr., Oshawa.

Ve3BWC-J. L. R. Berube, 5 Taunton Rd., Toronto 12.

Ve3BWD-W. E. Anderson, 11 Bridge St., Goderich.

Ve3BWE-H. G. McKay, 1149 Dufferin St., Toronto.

Ve3BWF-A. Baier, 30 Summerhill Ave., Toronto.

Ve3BWG-L. W. Lodge, 241 Gainsborough Road, Toronto.

Ve3BWH-W. J. Wright, Radio Range Station, Armstrong.

Ve3BW1-C, H. M. McKenzie, 108 Hiawatha Rd., Toronto.

Ve3BWJ—G. T. Lake, 35 Forest Ave., Sault Ste. Marie. Ve3BWK-J. Sherman, 20 Coolmine Rd., Toronto.

Ve3BWL-R. M. Brown, 25 Borden Ave. N., Kitchener.

Ve3BWM-G. Mitchell, Drawer "A," South Porcupine.

Ve3BWN-N. F. Quinton, 507 Pape Ave., Toronto.

Ve3BWO-K. R. Stockwell, 67 Wroxeter Ave., Toronto.

Ve3BWP-J. M. McIntosh, 16 Ann St., Galt. Ve3BWQ-H. R. Spencer, 117 Briar Hill Ave., Toronto.

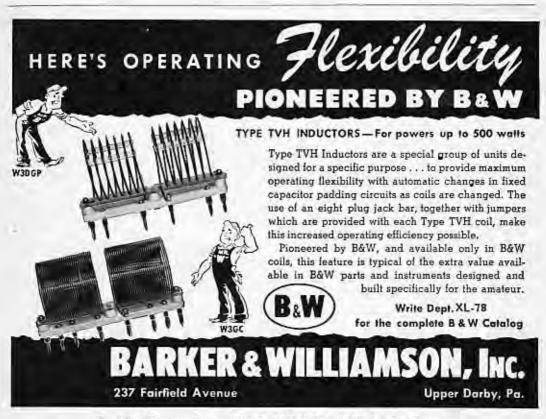
Ve3BWR-E. D. McKellar, Caribou Island, c/o Canal P.O. Sault Ste. Marie.

Ve3BWS—Reginald John Levens, 800 Dundas St. W., Toronto 3. Station at H.M.C.S. York, Fleet St., at Bathurst St., Toronto.

Ve3BWT-Wm. Gordon Walker, Con. 8, Lot. No. 21, Tilbury East Twp., County of Kent (Tilbury, Ont.), R.R. No. 3.

Ve3BWU—Hugh Campbell Gill, 175½ Dundas St., Apt. 26, London.

Ve3BWV-Wm. Frederick Furter, 546 Queen's Ave., London.



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3004	311	32	2"	.43
3005	50	4	2"	.48
3006.	514	8	2"	.48
3007	211	16	2" 2" 2" 2" 2" 2" 2" 2" 2"	.48
3008	3"	32	2**	.48 .57
3009	E-1	4	2"	.57
3010	311	8	2"	.57
3011	3"	16	2"	.57
3012	3"	32	2"	.57
3013	1"	4	3"	.67
3014	7.0	4 8	3"	.67
3015	1	16	31"	.67
3016	1"	32	3"	.67 .67

B & W JUNIOR INDUCTORS FOR POWERS UP TO 75 WATTS INPUT SPECIFICATIONS

*Capacity to Res. L.F. End of Band Band mmfd. End Linked Models 5JEL 15 10 22 22 TOJEL 15 15JEL 20 34 20JEL 40 40JEL 47 80 80JEL 60 Center Linked Models 5JCL 15 10 TOJCL 16 15 15JCL 16 20 20JCL 16 40 40JCL 33 80 53 80JCL Variable Link Models 5JVL 15 10 10JVL 22 15 27 15JVL 20 20JVL 21 40 40JVL 31 80JVL

Your Cost Any Type \$1.85

OHMITE RF CHOKES

Stock No	Range Megneyeles	Micro- henries	Core Dimensions	Price
Z-7 Z-14	3 to 20 Me.	85.0	6" x 10"	\$1,25
Z-14	8 to 35 Mg.	34.0	2" × 70"	.55
Z-28	20 to 60 Me.	21.0	1%" x 表"	.36
Z-50	35 to 110 Me.	6.5	新か × 650m	.27
Z-144	75 to 190 Me.	1.9	31" x 35"	.27
Z-235	160 to 350 Me.	0.84	我"大品"	.27
Z-460	820 to 520 Me.	0.20	14" x 32"	.27

Non-magnetic Brackets Furnished with Z-7. All chokes 1000 ma, rating except Z-14 and Z-28. These are rated at 600 ma.

CERTALAB BC-HI-KAPS

CERAMIC CONDENSERS

For by-poss or	in coupling cars.
500 Volt	
.00001 Mfd20	.00025
.000025	.0005
.0000520	.001
.0001	.002
.00015	.05 .24
.0002	.01

CRYSTALS

CM5 or VP3

AX2-80 Me	ter		3.50
AX2-40 Me			3.50
SMC 100-11			11.25
PR			
Z2-8000 to	8222 Kc		3.33
Z2-8334 to	9000 Kc.		3.33
VALPEY		V2-95-12	
CM5 or VP3	3500 to	4000 Kc	3.36
CM5 or VP3	7000 to	7300 Kc	3.36
CM5	6250 to	6750 Kc	3.36
CM5	6796.25 to	6836.3 Kc	. 3.36
CM5 or VP3	12500 to	13500 Kc	4.20
CM5 or VP3	13592,5 to	13727.5 Kc	4.20
CM5 or VP3	14000 to	14400 Kc	4.20

SELENIUM RECTIFIERS

28000 ta

29700 Kc. 5.40

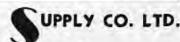
Hall	Wave for 115 Volt Operation	1
100 MA		1.30
150 MA	0.000	1.51
200 MA	which was a second seco	1.92

COAXIAL RELAYS

Designed for use with 52 or 75 ohm RG cables. Maximum rating is 880 watts at 100 megacycles.







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Designed for application



The No. 90881 RF POWER AMPLIFIER

RF POWER AMPLIFIER

This "500" watt, RF power amplifier unit may be used as the basis of a high power amateur band transmitter or as a means for increasing the power output of an existing transmitter. As shipped from the factory, the No. 90831 RF power amplifier is wired for use with the popular RCA or C.E. "\$12" type tubes, but adequate instructions are furnished for re-adjusting for operation with such other popular senateur style transmitting tubes as Taylor T240, Eimac 35T, etc. The amplifier is furnished popular senateur style transmitting tubes as Taylor T240, Eimac 35T, etc. The amplifier is furnished popular senateur style transmitting tubes as Taylor T240, Eimac 35T, etc. The amplifier is furnished popular senateur style transmitting tubes as Taylor T240, Eimac 35T, etc. The punel contains the grid and plate current milliameters. Plug-in inductors are available for operation on 10, 20, 40 or 80 meter amateur bands, from stock, as well as special coils to other for the new No. 30881 RF power amplifier.

JAMES MILLEN MFG. CO., INC.

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HAM-ADS

Copy for Ham-Ads must be received before the tenth of the month preceding issue. Rate is 25 cents per line.

COMPLETE station for sale—75 watt xmtr, VFO; Sky Champ rcvr, top-notch candition, \$200. Ve3AWE, phone King 41 ring 2

QSLS for discriminating homs. Distinctive! Colorful. Highest quality! \$1.50 per 100. Samples 10 cents. Ve3QS Print, 344 Pape Ave., Toronto...

WILL SWAP new Brigg & Stratton powered 110v 60c 500 watt plant for good communications receiver or cash. Mechanical and electrical regulation very good. Hydro now available. Also for sale complete Xtal controlled TX 150 watts fane CW in Hammond 1460-F cabinet uses pair 809's. VE3BB, Chapleou, Onl.

FOR SALE or SWAP for Receive: Pair U.S. Army Walkie-Talkie 10-6 meter transceivers. Excellent condition. Best offer takes. John Gillis, 447 Martimer Ave., Taranto, Ont.

FOR SALE—R1155 converted for spkr. and fone operation, power supply and 8" p.m. speaker, \$75.00 F.O.B. VE3EC, 22 Edgement Ave. N., Hamilton.

FOR SALE—No. 19 Mk. III Army wireless set, Particulars, John Young, Hallark, Alta.

FOR SALE—A real buy. 200 watt transmitter, (6L6-807-35-T) camplete for CW operation, without power supply 560.00 only. VE3BWY, 214 Delaware Ave., Toronto, Ont.

HALLICRAFTER SX284 receiver, as new, with speaker. Lou. Wasser, 1362 Bathurst St., Toronto; KE, 3644.

WILL SELL or TRADE an S-40 Hallicrafters communication receiver. Best offer. Would be interested in a 1155 receiver, not converted, in new condition, Interested also in exchange of technical data pertaining to Panoramic receivers using 5" Cathode Ray tubes like the 5BP1, being well documented on the subject. Who has data or list of ports (values) for the Model S35 Hallicrafters Panoramic receiver? I have the circuit on hand but the values of all components are urgently needed. Anselme Loperriere, VEZLF, Vercheres, P.Q.

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